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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/656,887 | 09/05/2003 | Rauno Javanainen | 81757.0037 | 1526 |

466 7590 04/16/2007
YOUNG & THOMPSON
745 SOUTH 23RD STREET
2ND FLOOR
ARLINGTON, VA 22202

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| EXAMINER |
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PATEL, NIRAV B

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| ART UNIT | PAPER NUMBER |
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2135

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/16/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/656,887 | Applicant(s) JAVANAINEN, RAUNO | |
| | Examiner Nirav Patel | Art Unit 2135 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2007 (Amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment filed on January 04, 2007 has been entered. Claims 14-33 are pending. Claims 1-13 are cancelled and Claims 14-33 are new added claim by the applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14, 15, 18, 19, 21-26 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holt, SR. et al (US Pub. No. 2003/0210699) and in view of Odinak et al (US Patent No. 6,690,289).

As per claim 14, Holt teaches:

an authentication string applied once to a communal string field of a simple network management protocol message to be transmitted in a communication link between a client and an agent [paragraph 0014 lines 1-3, Fig. 3, paragraph 0016, 0020, 0021 lines 1-4].

Holt teaches an authentication string (delimiter or non-alphanumeric string/character) for an authentication of the PDU (SNMP message) [paragraph 0016, 0017 lines 1-4, paragraph 0020, 0021 lines 1-4].

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Odinak teaches:

the authentication string based on a shared seed between the client and the agent, the authentication string determined by a substantially similar algorithm at both the client and the agent using the shared seed [col. 6 lines 9-14, 32-35].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Odinak with Holt, since one would have been motivated to authenticate the message using an authentication scheme based on a shared key value [Odinak, col. 2 lines 59-61].

As per claim 15, the rejection of claim 14 is incorporated and Holt teaches an authenticity checking program installed in a receiving one of the client and the agent for checking authenticity of the authentication string by checking the authentication string received in the simple network management protocol message against the authentication string determined by the algorithm program at the receiving one of the client and the agent [paragraph 0016, 0020, 0021 lines 1-4].

Odinak teaches checking authenticity of the authentication string by checking the authentication string received in the message against the authentication string determined by the algorithm program at the receiving one of the client and the agent [col. 6 lines 26-41, Fig. 9].

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As per claim 18, the rejection of claim 14 is incorporated and Holt teaches authentication string applied once to the communal string field of a simple network management protocol message [paragraph 0016, 0020, 0021 lines 1-4].

Odinak teaches:

another authentication string applied once to the, the another authentication string based on the shared seed between the client and the agent [Fig. 8 col. 8 lines 23-32], the another authentication string determined by the substantially similar algorithm at both the client and the agent using the shared seed, wherein the another authentication string is determined subsequent to the authentication string [Fig. 8, 9, col. 8 lines 13-32, 56-58, 66-67, col. 9 lines 10-15, col. 5-8].

As per claim 19, the rejection of claim 15 is incorporated and Holt teaches:

for each of the plural messages, the authenticity checking program installed in the receiving one of the client and the agent verifies that the authentication string received in the simple network management protocol message matches the authentication string determined by the algorithm program at the receiving one of the client and the agent [paragraph 0016, 0017 lines 1-6].

Odinak teaches:

each of the client and the agent are configured as both a message transmitting network entity and a message receiving network entity [col. 5 lines 5-8], each of plural messages transmitted between the client and the agent includes a different authentication string [col. 7 lines 36-60].

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As per claim 21, the rejection of claim 14 is incorporated and Holt teaches:

wherein the communication link comprises the Internet [Fig. 2, 3].

As per claim 22, the rejection of claim 14 is incorporated and Odinak discloses:

the algorithm generates a new string to be applied once, which string is based on the seed and on a secure random logic for being difficult to copy a pattern of a plurality of the strings [Fig. 8, 9, col. 6 lines 16-24, col. 8 lines 15-19].

As per claim 23, the rejection of claim 14 is incorporated and Odinak discloses:

the client and the agent remain synchronized in an operation loop of currently generated and once applied string by an acknowledgement message between the client and the agent [col. 5 lines 66-67, col. 6 lines 1-3, col. 7 lines 57-65].

As per claim 24, the rejection of claim 15 is incorporated and Odinak discloses:

one of the client and the agent sets an operation in accordance with the data communication unauthorized, when the authentication string in the received message does not correspond with the authentication string determined by the algorithm program at the receiving one of the client and the agent, each of the client and the agent are configured as both a message transmitting network entity and a message receiving network entity [Fig. 7, col. 7 lines 14-20, col. 5 lines 5-8].

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As per claim 25, it encompasses limitations that are similar to limitations of claim 14.

Thus, it is rejected with the same rationale applied against claim 14 above.

As per claim 26, the rejection of claim 25 is incorporated and it encompasses limitations that are similar to limitations of claim 15. Thus, it is rejected with the same rationale applied against claim 15 above.

As per claim 28, Holt teaches:

incorporating, at the transmitting network entity, the generated authentication string into a communal string field of a Simple Network Management Protocol message for transmitting the message in accordance with simple network management protocol [paragraph 0016, 0020, 0021 lines 1-4]; receiving the message at the receiving network entity; at the receiving network entity, checking the authentication string of the communal string field of the message for correspondence with the authentication string generated at the receiving network entity, and authenticating the message when there is a correspondence between the authentication string of the communal string field of the message and the authentication string generated at the receiving network entity [Fig. 2,3, paragraph 0016, 0017 lines 1-7, 0020, 0021 lines 1-4].

Holt teaches authentication mechanism for an authentication of the PDU (SNMP message) based on an authentication string (delimiter or non-alphanumeric string/character) [paragraph 0016, 0017 lines 1-4, paragraph 0020, 0021 lines 1-4].

Odinak teaches:

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establishing a seed at a first one of a transmitting network entity and a receiving network entity; sharing the established seed with a second one of the transmitting network entity and the receiving network entity [col. 6 lines 9-14, col. 7 lines 51-55]; generating an authentication string to be applied once based on the shared seed at both the transmitting network entity and the receiving network entity [Fig. 8, col. 8 lines 57-60].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Odinak with Holt, since one would have been motivated to authenticate the message using an authentication scheme based on a shared key value [Odinak, col. 2 lines 59-61].

As per claim 29, the rejection of claim 28 is incorporated and Holt teaches incorporating, at the transmitting network entity, the authentication string into a communal string field of a Simple Network Management Protocol message for transmitting the message in accordance with simple network management protocol [paragraph 0016, 0020, 0021 lines 1-4]; checking the authentication string of the communal string field of the message [paragraph 0016, 0020, 0021 lines 1-4].

Odinak teaches:

generating another authentication string to be applied once based on the shared seed at both the transmitting network entity and the receiving network entity [Fig. 8 col. 8 lines 23-32, col. 7 lines 36-60], incorporating, at the transmitting network entity, the another authentication string into another message [col. 8 lines 26-35]; receiving the

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another message at the receiving network entity; checking the another authentication string of the another message for the another authentication string, generating at the receiving network entity; authenticating the another message when there is a correspondence between the another authentication string of the another message and the generated another authentication string at the receiving entity [Fig. 9, col. 8 lines 5-17].

As per claim 30, the rejection of claim 28 is incorporated and Odinak teaches:

each of the transmitting network entity and the receiving network entity include both a client and an agent and are configured to operate as both the client and the agent [col. 5 lines 5-8].

3. Claims 16, 17, 27, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holt, SR. et al (US Pub. No. 2003/0210699) in view of Odinak et al (US Patent No. 6,690,289) and in view of Osmond (US Patent No. 6,044,468).

As per claim 16, the rejection of claim 14 is incorporated and Holt teaches the simple network management protocol message having a number of fields (e.g. communal string field/community field) [Fig. 2] and the communal string field is stored as a character string [paragraph 0020 lines 1-11, paragraph 0021 lines 1-4].

Osmond teaches:

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the simple network management protocol message comprises three parts including i) a protocol version, ii) the communal string field, and iii) a data area divided into protocol data units [Fig. 2], the communal string field is a simple network management protocol community identifier [Fig. 2].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Osmond with Holt and Odinak, since one would have been motivated to provide confidentiality and authentication of data transmitted over an insecure network communication [Osmond, col. 2 line 67, col. 3 lines 1-3].

As per claim 17, the rejection of claim 16 is incorporated and Osmond teaches:

the simple network management protocol message applies ASN-I encoding [col. 1 lines 42-45, col. 2 lines 27-29], and the algorithm at both the client and the agent is based on one of MD2, MD4, and MD5 [col. 2 lines 56-58].

As per claim 27, the rejection of claim 25 is incorporated and it encompasses limitations that are similar to limitations of claim 16. Thus, it is rejected with the same rationale applied against claim 16 above.

As per claim 32, the rejection of claim 28 is incorporated and it encompasses limitations that are similar to limitations of claim 16. Thus, it is rejected with the same rationale applied against claim 16 above.

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As per claim 33, the rejection of claim 32 is incorporated and it encompasses limitations that are similar to limitations of claim 17. Thus, it is rejected with the same rationale applied against claim 17 above. Further, Holt teaches the communal string field is stored as a charter string [paragraph 0020 lines 1-9, paragraph 0021 lines 1-4].

4. Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holt, SR. et al (US Pub. No. 2003/0210699) in view of Odinak et al (US Patent No. 6,690,289) and in view of Brainard et al (US Patent No. 6,985,583).

As per claim 20, the rejection of claim 14 is incorporated and Odinak teaches the shared seed [col. 6 lines 13-14, col. 9 lines 2-5]. Odinak doesn't expressively mention the shared seed is based on a on a random number generator.

Brainard teaches:

the shared seed is based on a random number generator, both the client and the agent include one of the random number generator and the shared seed is generated at one of the client and the agent and then communicated to the other of the client and the agent [Fig. 1, col. 5 lines 46-50, 58-61].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Brainard with Holt and Odinak, since one would have been motivated to verify the identity of the entity [Brainard, col. 1 line 13].

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5. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holt, SR. et al (US Pub. No. 2003/0210699) in view of Odinak et al (US Patent No. 6,690,289) and in view of Osmond (US Patent No. 6,044,468) in view of Brainard et al (US Patent No. 6,985,583).

As per claim 31, the rejection of claim 14 is incorporated and Holt teaches the simple network management protocol message having a number of fields (e.g. communal string field/community field) [Fig. 2] and the communal string field is stored as a character string [paragraph 0020 lines 1-11, paragraph 0021 lines 1-4].

Osmond teaches:

the simple network management protocol message comprises three parts including i) a protocol version, ii) the communal string field, and iii) a data area divided into protocol data units [Fig. 2], the communal string field is a simple network management protocol community identifier [Fig. 2]. Odinak teaches the shared seed/value (secret information) is shared by all entities [col. 2 lines 13-19] and the shared value is contained in one of the protocol data units of the simple network management protocol message [col. 3 lines 58-64].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Osmond with Holt and Odinak, since one would have been motivated to provide confidentiality and authentication of data transmitted over an insecure network communication [Osmond, col. 2 line 67, col. 3 lines 1-3].

Brainard teaches:

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the shared seed is generated by a random number generator program [Fig. 1, col. 5 lines 46-50].

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Brainard with Holt, Odinak and Osmond, since one would have been motivated to verify the identity of the entity [Brainard, col. 1 line 13].

Response to Amendment

6. Applicant has cancelled claims 1-13 and added new claims 14-33, which necessitated new ground of rejection. See rejection above.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sheth (US 688148) --- IP pool management utilizing an IP pool MIB

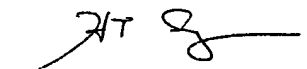
Kekic et al (US 6664978) --- Client-Server computer network management architecture

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nirav Patel whose telephone number is 571-272-5936. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax and phone numbers for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

*NBP**3/26/07*
HOSUK SONG
PRIMARY EXAMINER